



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,652	12/20/2005	Eric Joseph Harvison	COLGRA P59AUS	2649
20210	7590	09/06/2007	EXAMINER	
DAVIS & BUJOLD, P.L.L.C. 112 PLEASANT STREET CONCORD, NH 03301			MCNALLY, KERRI L	
		ART UNIT	PAPER NUMBER	
		2612		
		MAIL DATE		DELIVERY MODE
		09/06/2007		PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/552,652	HARVISON ET AL.
	Examiner	Art Unit
	Kerri L. McNally	2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 20 December 2005.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 21-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 21-28 and 31-38 is/are rejected.
- 7) Claim(s) 29,30,39 and 40 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 07 October 2005 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>10/07/2005</u> | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. **Claims 21, 22, 23, 25, 26, 31, 32, 33, 35, and 36** are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 4,015,235 (Demaine et al.) in view of US Patent No. 3,729,262 (Snead et al.).

Regarding claims 21 and 31, Demaine discloses an aircraft parking guidance system wherein the pilot sees a **fixed reference mark** along a **light of sight that is inclined** and the sees the mark as superimposed on an illuminated target as the aircraft approaches the fixed ground position. **The region of the target, which the reference mark obscures when viewed by the pilot, changes progressively as the aircraft approaches the fixed ground position** (Abstract, Column 2, lines 14-20). The bottom

part of the target is divided into two illuminated sections, respectively green and red, divided by a white vertical line. The top part of the target is divided from the bottom part of the target with a horizontal white line and the top half is illuminated above that white line in blue lights. The vertical and horizontal white lines come together to form a t-shape. **The fixed reference mark moves as the aircraft moves and the aircraft is correctly docked when the t-shaped reference mark completely obscures the white stripes on the target** (Column 5, lines 45-68). Examiner considers that the Demaine reference energizes the light sources to define a horizontal datum, even though the reference itself is not illuminated.

Demaine does not expressly disclose the light sources being energized selectively by row to emit light that defines a horizontal datum in the array.

Snead discloses a docking system wherein lenses and a light source are arranged to create a **vertical datum in a fixed display** (Fig. 1; Column 2, lines 1-6). Examiner considers that it would have been obvious to one of ordinary skill in the art at the time the invention was made to arrange and adjust the lenses and light source to selectively create a datum in the display so to illuminate the device for better visibility.

Regarding claim 22, Demaine and Snead teach the method of claim 21 as discussed above. Demaine also teaches an **array of lights** to create a target or background as discussed above in claim 21. Demaine does not expressly teach energizing the light sources of a horizontal row of the array to define the horizontal datum.

Snead discloses a docking system wherein lenses and a light source are arranged to create a **lighted vertical datum in a fixed display** (Fig. 1; Column 2, lines 1-6). Snead does not expressly disclose creating a horizontal datum with lights, but the Examiner considers that it would have been obvious to one of ordinary skill in the art at the time the invention was made to create a horizontal bar of lights in a similar fashion that Snead created a vertical bar of lights.

Regarding claims 23 and 33, Demaine and Snead teach the method of claim 21 as discussed above. Demaine does not expressly teach the step of defining the horizontal indicator by energizing light sources.

Snead discloses a **horizontal indicator that is created using a bar of light** (Fig. 1; Column 2, lines 6-10). It would have been obvious to one of ordinary skill in the art at the time the invention was made to create a lighted indicator that was brighter and easier for the pilot to see.

Regarding claims 25 and 35, see claim 21 above for discussion on Demaine's system with the T shaped indicator and maneuvering it until the T indicator is aligned with the white striped of the target.

Regarding claims 26 and 36, Demaine and Snead teach the method of claim 25 as discussed above. Demaine does not expressly teach the step of defining the vertical indicator by energizing light sources.

Snead discloses a **vertical indicator line that appears to move with the aircraft that is created via a light source** (Column 1, lines 60-68; Column 2, lines 1-10). It would have been obvious to one of ordinary skill in the art at the time the invention was made to create a lighted indicator that was brighter and easier for the pilot to see.

Regarding claim 32, all the claim limitations of claim 32 are discussed above in reference to claims 21 and 22.

4. **Claims 24, 27, 34, and 37** are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 4,015,235 (Demaine et al.) as modified by US Patent No. 3,729,262 (Snead et al.) and further in view of US Patent No. 5,291,195 (Gross).

Regarding claims 24 and 34, Demaine and Snead teach the method of claim 22 as discussed above. Demaine does not expressly teach the step of using light-emitting diodes as the light sources.

Gross teaches a **target light for docking that comprises LEDs** (Column 3, lines 15-17). It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize LED's for light sources, since they are small and each one can be lit individually to create an appropriate light scheme depending on the needs of the system.

Regarding claims 27 and 37, Demaine and Snead teach the method of claim 26 as discussed above. Demaine does not expressly teach the step of using light-emitting diodes as the light sources of the vertical indicator.

Gross teaches a **target light for docking that comprises LEDs** (Column 3, lines 15-17). It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize LED's for light sources, since they are small and each one can be lit individually to create an appropriate light scheme depending on the needs of the system.

5. **Claims 28 and 38** are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 4,015,235 (Demaine et al.) as modified by US Patent No. 3,729,262 (Snead et al.) and further in view of US Patent No. 4,733,833 (Shepherd).

Regarding claims 28 and 38, Demaine and Snead teach the method of claim 25 as discussed above. Demaine also teaches an **array of lights** to create a target or background as discussed above in claim 21. Demaine does not expressly teach energizing at least some of the light sources of two spaced columns of the array to define the vertical datum.

Shepherd discloses a vehicle docking system wherein a display is mounted on a face of a building and that **display shows two vertical lines, a left line and a right line, so that when the vehicle is on the appropriate centerline between them**, both left and right lines are illuminated green (Fig. 1; Fig. 2; Column 1, lines 45-66). It would have

Art Unit: 2612

been obvious to one of ordinary skill in the art at the time the invention was made to utilize two vertical lines to display to the vehicle a boundary system that the docking vehicle must try to stay within to help guide the vehicle to the dock.

Allowable Subject Matter

6. **Claims 29, 30, 39, and 40** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: US Patent No. 6,389,334 (Castor), US Patent No. 4,464,648 (Smith et al.), US Patent No. 4,763,125 (Newman et al.), US Patent No. 4,249,159 (Stasko), US Patent No. 4,184,655 (Anderberg), US Patent No. 3,775,741 (Zechnowitz et al.), and US Patent No. 3,767,309 (Brown et al.).

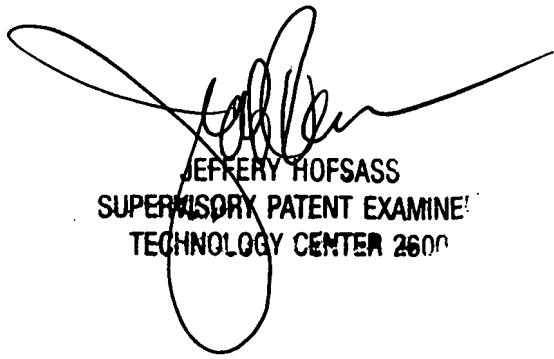
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kerri L. McNally whose telephone number is 571-270-1840. The examiner can normally be reached on Monday - Friday 7:30 AM - 5:00 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Hofsass can be reached on 571-272-2981. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2612

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KLM



JEFFREY HOFSSASS
SUPERVISORY PATENT EXAMINEE
TECHNOLOGY CENTER 2600